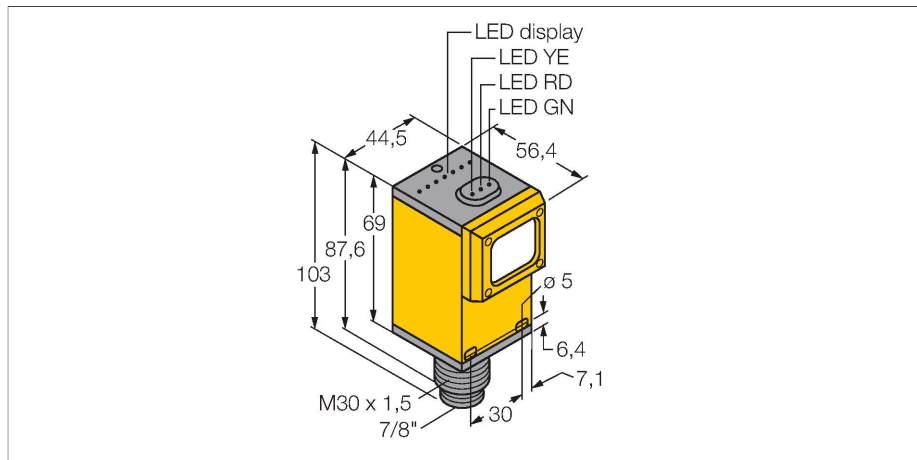


# Q45VR2DQ

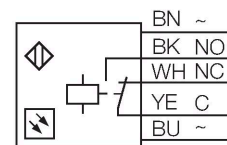
## Photoelectric Sensor – Diffuse Mode Sensor



### Features

- Male connector 7/8"
- Protection class IP67
- Sensitivity adjusted via potentiometer
- Operating voltage: 90...250 VAC
- Relay output, changeover (SPDT)
- Light or dark operation, adjusted via selector switch

### Wiring diagram



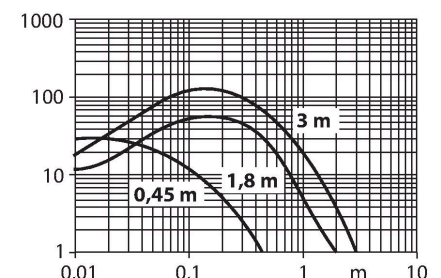
### Technical data

Type	Q45VR2DQ
ID no.	3037000
<b>Optical data</b>	
Function	Proximity switch
Operating mode	Diffuse
Light type	IR
Wavelength	880 nm
Range	0...450 mm
<b>Electrical data</b>	
Operating voltage	90...250 VAC
No-load current	≤ 50 mA
Output function	Complementary contact, Relay output
Readiness delay	≤ 100 ms
Response time typical	< 15 ms
Setting option	Potentiometer
<b>Mechanical data</b>	
Design	Rectangular, Q45
Dimensions	Ø 30 x 56.4 x 44.5 x 101.6 mm
Housing material	Plastic, Thermoplastic material
Lens	plastic, Acrylic
Electrical connection	Connectors, 7/8", PVC
Number of cores	5
Ambient temperature	-40...+70 °C
Protection class	IP67
Special features	keep/defer
Power-on indication	LED, Green
Switching state	LED, Yellow

### Functional principle

Like retroreflective sensors, diffuse mode sensors also contain emitter and receiver circuitry in the same housing. However, diffuse mode sensors do not detect the interruption of the light beam but the reflection of the object. An object is detected if it reflects sufficient light back to the receiver. The switching distance of diffuse mode sensors thus largely depends on the object's reflectivity. This type of sensor is especially suited for detection of transparent objects (diffuse mode sensor with or without background suppression or convergent mode sensors).

Excess gain curve  
Excess gain in relation to distance



## Technical data

Error indication	LED, green
Excess gain indication	LED, red
<b>Tests/approvals</b>	
MTTF	67 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus, CSA

## Accessories

**SMB30A** 3032723

Mounting bracket, rectangular, stainless steel, for sensors with 30mm thread

**SMB30FAM10** 3011185

Mounting bracket, stainless steel, for M10 x 1.5 thread, thread length 30 mm

**SMB30SC** 3052521

Mounting bracket, PBT black, for sensors with 30 mm thread, rotatable